CLAIMS:

1. Cell cultures exhibiting cell-type specific expression of a non-cell-damaging fluorescent protein, consisting of aggregates (embryoid bodies) of non-human mammal embryonic stem (ES) cells stably transfected with a DNA construct comprising

   - a DNA sequence coding for said non-cell-damaging fluorescent protein; and

   - a cell- and/or development-dependent promoter operably linked with said DNA sequence;

   said DNA construct being integrated in the native DNA.

2. The cell cultures according to claim 1, wherein said ES cells are derived from rodents, especially mice.

3. The cell cultures according to claim 1 or 2, wherein said non-cell-damaging fluorescent protein is selected from Green Fluorescent Protein (GFP), Red Fluorescent Protein and Blue Fluorescent Protein.

4. The cell cultures according to any of claims 1 to 3, wherein said promoter is a promoter specific for heart cells, neurons, glia cells, hematopoietic cells, endothelial cells, smooth muscle cells, skeletal muscle cells, cartilage cells, fibroblasts or epithelial cells.

5. The cell cultures according to claim 4, wherein said promoter is selected from Nkx-2.5, human α-actin and MLC-2V promoters, especially being the heart specific human α-actin promoter.

6. The cell cultures according to any of claims 1 to 5, wherein said DNA construct includes further functional DNA sequences, especially enhancer and selective sequences.

7. The cell cultures according to claim 1, wherein said DNA construct is the plasmid pCX-(α-act)GFP-Neo (DSM 11633).

8. A method for preparing the cell cultures according to any of claims 1 to 7, comprising:

- introducing a DNA construct as defined in claims 1 and 3 to 7 in starting ES cells of non-human mammals; and

- screening for stably transfected ES cells.

9. The method according to claim 8, wherein said introducing is effected by electroporation.

10. The method according to claim 8 or 9, further comprising the culturing of said stably transfected ES cells in vitro.

11. A method for the toxicological examination of substances, comprising the examination of the effects of said substances on the cell cultures according to claims 1 to 7 using fluorimetric methods.

12. A method for producing transgenic non-human mammals exhibiting cell-type specific expression of a non-cell-damaging fluorescent protein, comprising:

- injecting ES cells according to any of claims 1 to 6 into blastocysts of non-human mammals; and

- transferring the blastocysts into surrogate mothers.

13. Transgenic non-human mammals obtainable by the method according to claim 12.

14. Use of the non-human mammals according to claim 13 for examining stages of development of cells, comprising the examination of the

correspondingly marked cells of said non-human mammals in vitro using fluorimetric methods.